



**Special Operations Command (SOCOM) Purposed Emergency Access Response
Point of Injury and Trauma Simulation (SPEARPOINTS)**

Solicitation Number: 47QFSA20R0010

GSA Acquisition ID: 47QFSA20K0013

Performance Work Statement (PWS) - REVISED July 25, 2022, Mod 03

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Modification History: Changes made on the most recent modification are highlighted throughout this document and unless otherwise notified, no further changes have been made or implied. Modifications are listed in descending order.

Mod 05:

1. To extend services and facilitate the completion of addition training requirements.

Mod 04:

1. To extend services and facilitate the completion of addition training requirements.

Mod 03:

1. Update PWS paragraph 1.1 to add Class VIII usage and accountability metric.
2. Updated PWS paragraph 2.5.2 and 2.5.3 to clarify that defect resolution and document updates are included in the cybersecurity requirement.
3. Update PWS paragraph 3.3 to change “24-72 hours per exercise” to “4-72 hours per exercise”.
4. Update PWS paragraph 6 to change deliverable due date for Scientific and Technical Reports – Cybersecurity Recurring Reports from “Initial” to “Draft”.
5. Updated PWS paragraph 5.1 to change the requirement for the instructors to be NRP certified.

Mod 02:

1. Updated PWS paragraph 5.1 to require instructor/operators to have no more than 10 years since leaving USSOCOM.
2. Updated references from Point of Demand to Point of Injury.

Mod 01:

1. Re-incorporated CDRLS in the entirety.
2. Removed paragraph 3 of PWS 2.5.
3. Replaced references of the Joint Project Manager for Medical Modeling and Simulation (JPM MMS) with Program Manager for Medical Simulation Training (PM MST).
4. Replaced references of Joint Medical Exchange & Documentation of Information for Combat Casualty Care (J-MEDIC3) with Battlefield Assisted Trauma Distributed Observation Kit (BATDOK).
5. Incorporated final DD254.
6. Removed contractor proprietary markings from PWS.
7. Edited the pricing spreadsheet to change the contract type on CLINs 0004-0006 to T&M to align with the Task Order Request and CLIN structure found within ITSS. The pricing spreadsheet wasn't updated upon award

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Crosswalk Matrix

SOO Objective	PWS Paragraph
Full Operational Capability Objectives	
a) Provide a capability for SOF teams to train individually or collectively on SOF Medical Critical Tasks.	2 Prototype System Development and Installation
b) Provide a capability to stress the operational planning and execution of a SOF mission when also faced with one (1) or more critical care patients in a simulated operational or contingency environment.	2 Prototype System Development and Installation
c) Provide a capability that replicates an in-theater safe house/team house environment.	2 Prototype System Development and Installation
d) Provide a Point of Injury capability that addresses solutions to support sustainment of Tactical Combat Casualty Care (TCCC) First Responder, 68W, Special Operations Combat Medic (SOCM), and 18D Module task lists.	2 Prototype System Development and Installation
e) Provide surgical skills capability to support sustainment of surgical skills for both individuals and teams, including forward surgical teams and non-surgeons, in austere environments.	2 Prototype System Development and Installation
f) Provide assessment of training operations, based on the SOF medical critical task list (Appendix A), necessary for the conduct of SOF treatment/evacuation execution.	3.8 Development of Training Materials
g) Provide the capability for SOF units to render medical care at Point of Injury.	2 Prototype System Development and Installation
h) Provide a capability to build scenarios guided by the use of the Joint Trauma Registry, in order to facilitate training of historically significant patients addressing both common and unique medical scenarios.	2 Prototype System Development and Installation
i) Provide Prescribed Medical Courses to support re-fresher of Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Pediatric Education for Prehospital Providers (PEPP).	2 Prototype System Development and Installation 3.8 Development of Training Materials
Testing and Training On-site Support	
a) Provide on-site Testing and Training Support (TTS) for a period of twelve (12) months following prototype installation. The TTS shall include personnel with expert skills and knowledge to support collective training of tasks identified in Appendix A.	4 Testing and Training Support
i. Training events shall support up to 30 students with the ability to conduct smaller breakout training venues of up to 15 students.	4 Testing and Training Support

SOO Objective	PWS Paragraph
ii. Training scenarios supporting Exercise Evaluations (EXEVAL) and Pre-Mission Training (PMT) events will last from 48 to 72 hours in length dependent upon the training objective. This allows for two 24-36 hours rotations of multiple teams if required. Training scenarios will include trauma and clinically based situations requiring the personnel to treat and maintain the patient or patients for up to 72 hours within an austere and/or denied area environment. Additional shorter duration scenarios will be integrated into collective unit training events.	4.1 Testing and Training Support
iii. Contractor shall be available and provide training for a maximum of 45 weeks annually as requested by the Government customer.	4 Testing and Training Support
b) Provide overall functional evaluation of prototype operational system to inform future technology enhancements.	4.1.1 System Test and Evaluation
c) Collect and report performance information of the prototype operational capability through data collection and audio/video means.	4.1.1 System Test and Evaluation
d) Provide software support to maintain and update prototype operational system software.	4.4 Site Support
e) Provide a transition approach to the Government upon contract completion.	3.11 ICS and Transition Planning
e) Provide an overall prototype system Operational Availability of 90%.	4.4 Site Support 1.1 Program Management Metrics and Technical Performance Measures
f) Training Support provided by Instructor/Operators shall have the following qualifications: i. Required-Minimum of 5 year experience serving in a medical capacity in a USSOCOM unit with no more than 10 years while remaining an active Prolonged Field Care trainer since their departure from USSOCOM. ii. Required-Minimum of current NRP, current or previous USSOCOM Special Operations Advanced Tactical Paramedic (SO-ATP), ACLS, PEPP, and BLS.	5.1 Instructor/Operator Qualification Requirements
g) Instructor/Operators shall attend the Special Operations Combat Medic Skills Sustainment course (SOCMSSC), Special Forces Medical Sergeant Skills Sustainment Course (SFMSSSC), and SOCMSSC. This allows the Contractors to remain current on SOF medics' best practices, required skills and equipment, techniques, tactics, and procedures. Both courses are conducted at the Joint Special Operations Medical Training Center at Ft. Bragg, NC. The Government will fund and coordinate attendance with SOCOM, however associated travel expenses will be incurred under the travel CLIN.	5.1 Instructor/Operator Qualification Requirements
Program Management Objectives	
a) Establish and maintain an integrated program management system, which shall plan, direct, integrate and control the administrative, management, technical, logistical, financial, production and support functions during the Period of Performance (PoP) of this contract.	1 Program Management

SOO Objective	PWS Paragraph
b) Manage work efforts to optimize total system performance; promote interoperability and common solutions; and minimize total ownership cost.	1 Program Management
c) Host a technical Kick-Off meeting within 15 working days after contract award at the Contractor's location or other means necessary. The purpose of the conference shall be to establish the framework of the Contractor and Government interaction during the PoP of the contract.	1.9.2 Technical Kick-Off Meeting
d) Prepare, implement, and maintain a risk management process that includes identification, analysis, mitigation planning, mitigation plan implementation, and tracking.	1.6 Risk Management
e) Provide, implement, control and maintain an Integrated Master Schedule (IMS) that presents the plan and schedule to meet all requirements.	1.4 Integrated Master Schedule
f) Coordinate and document monthly Program Management Reviews (PMR) with the Contracting Officer Representative (COR).	1.2 Program Management Reviews
g) The COR will evaluate Contractor's performance on a monthly basis using the following performance standards:	1.7 Quality Management
Engineering and Technical Performance Objectives	
a) Design, develop, integrate and test COTs components into a fully functional SPEARPOINTS prototype operational system taking into consideration the physical constraints of the facility and providing a technical solution that as a minimum provides:	2 Prototype System Development and Installation
i. High fidelity patient simulators (HFPS) with integrated capability to operate with task trainers for Escharotomy, Humeral I/O, Fasciotomy, Internal Abdominal Bleed, Ultrasound and Central Line Infusion.	2.2 Hardware Engineering 2.4 Hardware/Software Integration
ii. A capability in the prototype operational system for asset management, exercise control and, After Action Review (AAR) of training events.	2.4 Hardware/Software Integration
iii. The capability to use soldier provided Medical Tactical Equipment Set (TACSET) and the SOCOM TCCC Evacuation Set common to SOF Teams, such as the Tribalco Integrated Casualty Set.	2 Prototype System Development and Installation
iv. Integration of the Battlefield Assisted Trauma Distributed Observation Kit (BATDOK) capability into the prototype operational system. BATDOK is a virtual medical platform that provides telementoring/consulting, integration of medical devices, documentation of care, and transmission of a patient's medical status throughout the roles of care.	2.4 Hardware/Software Integration
v. Technical solution shall not involve the use of perfused cadavers.	2 Prototype System Development and Installation
b) Analyze future requirements to lay out overall objective capability system roadmap for future enhancements to be integrated into the prototype system.	2.1 Systems Engineering

SOO Objective	PWS Paragraph
c) Develop multiple training scenarios tailored to each mission requirement to support the testing of the prototype operational system capability.	2.3 Software Engineering 2.4 Hardware/Software Integration
d) Develop a Software Product Specification (SPS) package, that includes the baseline version of the executable SPEARPOINTS software fielded, and it's associated documentation. The SPS package shall include the SPS document, the executable software, source files, source code, and any Application Programming Interface (API) specifications. The package shall also include detailed instructions on how to install and run the SPEARPOINTS software, systems requirements, and any special processes or procedures required for a successful installation and execution of the software.	2.6 Development of a Technical Data Package
e) Develop, produce, and maintain a production level Technical Data Package (TDP) providing design, engineering, manufacturing and quality assurance requirements information to procure or manufacture an interchangeable item that duplicates the physical and performance characteristics of the original product, without additional design engineering effort or recourse to the original design activity.	2.6 Development of a Technical Data Package
Cybersecurity Objectives	
a) Address and implement the Risk Management Framework (RMF) for an expected Type III stand-alone connected system that has the appropriate security categorization levels for Confidentiality, Integrity and Availability.	2.5.1 Risk Management Framework
b) All Cybersecurity and Cybersecurity-enabled products shall be securely configured in accordance with Department of Defense (DoD) approved security configuration guidelines.	2.5 Cybersecurity
c) Plan, deliver, and implement a Cybersecurity Management Plan (CMP)	2.5.1 Cybersecurity Management Plan
d) Produce all of the necessary artifacts to complete the RMF package, in accordance with the current versions of DoDI 8500.01, DoDI 8510.01, DoDM 8570.01, CNSSI 1253, and NIST SP 800-53, DoDI 8582.01, Rapid Tactical RMF Overlay Memorandum, Defense Health Agency (DHA) Interim Procedures Memorandum (IPM) 18-006; DHA IPM 18-013, and AR 25-2. to deliver and operate a fully accredited system that has the appropriate security categorization levels for Confidentiality, Integrity and Availability in accordance with paragraph 5.5 (a) of this document.	2.5.4 Information Assurance Vulnerability Management Program

SOO Objective	PWS Paragraph
<p>e) RMF Package shall include:</p> <ul style="list-style-type: none"> • SSP • Appointment Letter • Boundary Diagram • Data Flow • Interconnection agreements • Scan reports • Security Technical Implementation Guides (STIG) check lists & deviations • AUPs • Configuration Management Plan • SW/HW lists • License tracking (maybe for AWS) • ATO-A for sites to sign • Ports/Protocols/Service logs • Contingency Plan 	<p>2.5.1 Risk Management Framework</p>
<p>f) As part of the Information Assurance Vulnerability Management Program (IAVMP), the Contractor shall document the incorporated and unincorporated Information Assurance Vulnerability Alerts (IAVAs), Information Assurance Vulnerability Bulletins (IAVBs), and Information Assurance Vulnerability Technical Advisories (IAVTAs). The IAVMP plan shall include but is not limited to identifying and assessing potential threats to determine risks. It also involves developing and implementing controls, countermeasures, or solutions. The Contractor shall monitor the system for compliance and success, while evaluating and refining the IAVMP as necessary. The Contractor shall incorporate all applicable DoD and Department of the Army (DA) Information Assurance Vulnerability Management messages issued on behalf of the Department of Army G3, CIO/G6 and Joint Task Force-Global Network Operations. The Contractor shall provide justification for each unincorporated IAVMP message (i.e., describe the specific negative impact the IAVMP message incorporation would have on the system operation).</p>	<p>2.5.4 Information Assurance Vulnerability Management Program</p>

SOO Objective	PWS Paragraph
g) Establish Host Based Security System (HBSS) compatibility and compliance for any system that touches the Army Network directly or indirectly or has the capability to connect, providing network administrators and security personnel with mechanisms to prevent, detect, track, report, and remediate malicious computer-related activities and incidents across all DoD networks and information systems in accordance with the Joint Task Force for Global Network Operations (JTF-GNO) released Communications Tasking Order (CTO) 07-12 (Deployment of HBSS) mandating the deployment of HBSS on all Component Command, Service and Agency (CC/S/A) networks within DoD. All HBSS compliance and guidance will be coordinated through PEO STRI's, CIO, System Engineering Office (SEO).	2.5.4.1 Establish HBSS
Logistics Objectives	
a) Perform reliability analysis to ensure that any new COTS components procured outside of the allocated baseline TDP meets the same (or higher) level of reliability as the current component that the item is replacing.	3.1 Logistic Support Analysis
b) Analyze the design per the TDP and present a recommended spares list for Government approval.	3.1. Logistic Support Analysis 3.4 Recommendation of Spares
c) Perform analysis to identify disposal procedures associated with those components, assemblies, sub-assemblies, parts and materials that contain hazardous materials, wastes and pollutants. The analysis shall also identify those items that can be recycled, reused or salvaged.	3.5 Development of Disposal Procedures
d) Identify new equipment or repairable items with a cost greater than \$5,000; all Line Replaceable Units (LRU) and hardware configuration items; Special Test Equipment; Special Inspection Equipment; Special Tooling; and embedded subassemblies and components or parts that may be serially managed, that are mission essential or are controlled inventory items. The Contractor shall perform an engineering analysis required to determine the appropriate method for marking each item that requires unique identification. For such items as approved by the Government, the Contractor shall provide DoD unique item identification. Exceptions to marking items for which Item Unique Identification (IUID) is mandated prior to delivery to the Government, if granted by the Government, will be processed as specified in Defense Federal Acquisition Regulation Supplement (DFARS) 211.274-2.	3.1 Logistic Support Analysis 3.6 Unique Identification (IUID) Marking and Verification

SOO Objective	PWS Paragraph
e) Provide an Operator User's Manual (OUM), documenting tasks as necessary to operate the system. The Contractor shall identify and document operator specific tasks for preventive maintenance checks, inspection, lubrication, adjustment, and operator level repair and replacement tasks. The Contractor shall identify all required spare parts, consumables, tools, and test/support equipment associated with the operation and operator's preventive maintenance tasks.	3.7 Development of Technical Publications and Manuals
f) Provide a System Maintenance Manual (SMM) documenting tasks as necessary to maintain the system. The Contractor shall identify and document maintainer specific tasks for detailing installation, fault isolation, LRU procedures, software update procedures, and all necessary maintenance procedures to maintain the trainer. The Contractor shall identify all required spare parts, consumables, tools and test/support equipment associated with the maintenance tasks.	3.7 Development of Technical Publications and Manuals
g) Provide, after delivery of the prototype, one New Equipment Training (NET) to the 5 th Special Forces Group. This training shall be a self-contained course and provide detailed operational and maintenance knowledge of the product. The NET shall support the training of up to ten (10) individuals for a maximum of sixteen (16) hours.	4.1.2 New Equipment Training
h) Provide commercial licenses and warranties of one year in length from delivery acceptance. All warranty information associated with all procured items shall be delivered at the time of fielding. The warranty product data shall include at a minimum: manufacturer's point of contact, CAGE codes, length of warranty, and any special warranty provisions.	3.9 Commercial Licenses and Warranties
i) Be responsible for shipping, inspecting, staging and securing the equipment at the site prior to installation. The Contractor shall assist the Government during site inventory of all system equipment.	3.10 Shipping, Inspecting, and Staging of Equipment
j) Provide a logistics support concept to ensure that the system is to be available for use 24-72 hours per exercise event, for 45 weeks per year to train no more than two teams of up to 15 trainees per class.	3.3 Logistics Support Concept
k) Develop, maintain, and update Configuration Management procedures and processes for control of all products procured under this contract.	1.5 Configuration Management
l) Operate and maintain the simulation equipment.	3 Operations and Maintenance

Background

The Program Manager for Medical Simulation Training (PM MST) is seeking an acquisition effort using the latest medical training technology in support of medical task training, to support the initial prototype of SPEARPOINTS. The initial prototype will provide a capability for Special Operations Forces (SOF) teams to train collectively on SOF Medical Critical Tasks, in a mission scenario that replicates in-theater safe house/team house environment with the ultimate intent on informing the production and fielding of an enduring capability.

Scope

This Performance Work Statement (PWS) defines the effort required to enable Special Operations Forces (SOF) teams to be trained on SOF Medical Critical tasks in either individual or collective training sessions. The Contractor shall provide all labor, materials, equipment, and supplies required to:

- a. Develop, integrate, and test the SPEARPOINTS Prototype at the Prolonged Field Care Training Facility, Fort Campbell, Kentucky (KY)
- b. Provide operation and maintenance of the SPEARPOINTS prototype; and
- c. Provide testing and training using the SPEARPOINTS prototype.

Period of Performance

The period of performance for this task order is anticipated to be no longer than 21 months total. The prototype shall be delivered, installed, and tested no later than nine months from contract award. During this timeframe, all preparations for the Authority to Operate (ATO) shall be started and initial scans and draft documentation shall be provided to the Government for review. Upon Government acceptance of the Prototype Installation, Operations and maintenance, Testing and Training Support (TTS) of the prototype system shall commence and be performed for 12 months.

Place of Performance

The place of performance shall be a mix of Contractor and Government sites. Prototype development shall be performed at the Contractor facility in Orlando, FL, within 5 miles of Defense Health Agency (DHA) PM MST to enable collaboration with PM MST during the SPEARPOINTS prototype development effort.

SPEARPOINTS Installation, Operations and Maintenance, and Testing/Training work shall be performed at the Government site at the 5th Special Forces Group (Airborne) (5th SFG(A)) facility at Fort Campbell, KY. This facility is dedicated to the SPEARPOINTS effort and as such the SPEARPOINTS prototype shall be installed at this site, and all subsequent Operations & Maintenance and Testing & Training Support shall be performed on-site at this location.

General Work Requirements

For the purpose of this PWS, the term “prototype” refers to the integration of all hardware and software components used to produce a full operational capability for SOF teams to train collectively or individually on SOF Medical Critical Tasks in a simulated mission scenario that replicates a safe house/team house environment.

As an independent Contractor and not as an agent or employee of the Government, the Contractor shall provide technical effort. The Contractor shall provide experienced personnel, both on-site and off-site, to manage the non-inherently Government tasks identified in this PWS.

These tasks shall be conducted independently by the Contractor. All pertinent information related to the support services specified within this PWS shall be Government-owned.

The contractor shall comply with the security requirements found in the DD Form 254, Contract Security Classification Specifications.

Per DoD 8570.01-M, Defense Federal Acquisition Regulation Supplement (DFARS) 252.239.7001 and AR 25-2, the contractor employees supporting IA/IT functions will be appropriately certified upon contract award. The baseline certification as stipulated in DoD 8570.01-M must be completed upon contract award.

1 Program Management

The Contractor shall provide the Government with overall program and project management administrative support, including project coordination, kickoff, stand-up, monitoring, documentation, reporting, vendor communication, closeout, and review. The Contractor will manage, from initiation to completion, all departmental projects with subject matter. The Contractor will further provide administrative support in the areas of status reporting, data gathering, data entry, report preparation, support for briefings, funding profiles, task lists, installation or customer meeting logistics, and other duties as required. The Contractor will research, review, document, and implement organizational processes and procedures. The Contractor will provide analysis support of departmental resources. The Contractor will provide comprehensive Program Management over all aspects of this contract program, including reporting, deliverables, performance, stakeholder engagement, and staff management, training, onboarding, and more.

The Contractor shall provide overall program management and administrative support to ensure the requirements of the contract are successfully accomplished. The Contractor shall monitor and track key cost, schedule, performance, and supportability metrics on a monthly basis, and notify the Government of any issues and concerns that arise. Metrics are to be tracked for the program as a whole when appropriate. The Contractor shall track and maintain resources to ensure overall programmatic performance.

1.1 Program Management Metrics and Technical Performance Measures (TPMs)

The Contractor shall provide project oversight/management as necessary to track, manage, and report on the cost, schedule, and performance status of this effort. The contractor shall track work progress and performance utilizing program management and technical performance metrics specified by the Government which, at a minimum, shall include the metrics detailed in the table below.

Performance Objective	Performance Standard	Method of Surveillance	Performance Threshold
Meet defined System Performance/Availability Requirements by preventing operations/administration errors (human error)	All changes are documented.	Human errors, when they occur, are documented and appropriate remediation action is taken.	<1 documented operator error/quarter. Operations staff receive remedial training and counseling if errors occur

Performance Objective	Performance Standard	Method of Surveillance	Performance Threshold
Document all Operations activities in the Operations Logs and in CM databases	All changes are documented in Operations logs and CM databases	Activity logs are complete and CM databases are accurate and up to date, without omissions - Able to track system changes	<2 occurrences per quarter of failure to document a CM change
Maintain Accurate Configuration Management Records	No deviation between CM databases and the actual system configuration	CM records accurately reflect all SPEARPOINTS system/environment configurations.	<2 occurrences per quarter of failure to document a change
Changes are not implemented in IDE environments without appropriate approvals/documentation	No changes allowed without approval	All changes are documented. No changes are made without CCB/PM approvals after required testing	100% compliance
Complete assigned backup and restore operations as scheduled, without errors	No missed backups. Restore operations completed without operations errors. Database replication process errors are detected and resolved within 30 minutes (unless it is an issue outside control of Team MicroHealth)	All backups are completed when required. Restore operations are successfully completed. Database replication processes are continuously monitored, and problems are rapidly corrected.	100% compliance. Zero operations errors for restore operations (not including hardware, software, or media failures). 1 Incident per quarter of failure to correct within 30 minutes.
Team MicroHealth will resolve assigned incidents/problems promptly and efficiently	Decrease in mean time to resolve incidents/problems by incident type (i.e. software, hardware, etc)	Decrease in mean time to resolve incidents/problems by incident type (i.e. software, hardware, etc.)	Mean time to resolve incidents by incident type (i.e. software, hardware, etc). Minimum time to resolve or escalate: Priority 1 - <24 hours, Priority 2 - < 72 hours, Priority 3 - <3 business days
Customers will be satisfied	Provide responsive and effective services	Customer complaint	No more than one validated customer complaint for duration of the contract

Performance Objective	Performance Standard	Method of Surveillance	Performance Threshold
SPEARPOINTS System performance	Number and duration of unscheduled downtime instances due to operator error or actions by Team MicroHealth	Number and duration of unscheduled downtime instances due to operator error or actions by Team MicroHealth	90% prototype system operational availability or higher as specified by the Government
Maintain Class VIII usage and accountability, to include total usage and usage per scenario.	All changes are documented.	All changes are documented.	100% compliance

The contractor shall plan, implement, and maintain a Life Cycle Cost (LCC) management process to minimize the system cost and use LCC to conduct trade studies, evaluate design, support alternatives, and recommend resource support requirements. The contractor shall define and monitor Technical Performance Measures (TPMs) to ensure conformance of the test instrumentation systems with contract requirements. Contractor shall include information regarding compliance with the performance metrics, including any variance in their monthly Progress, Status and Management Report.

1.2 Program Management Reviews

The Contractor shall conduct program management reviews at the Contractor's facility on a monthly basis in accordance with the IMS. The first PMR shall be no more than 45 calendar days after the combined Technical Kick-Off Meeting / Post Award Conference (PAC). The PMR shall provide a program overview and shall include as a minimum:

- Hardware status
- Risk Assessment
- Subcontract management/progress
- Production planning and status
- Logistics planning
- Test planning
- Training and technical publications status
- Schedule status
- Pre-selected topics of interest
- Cybersecurity

Status and information at the review shall reflect currency since the previous review. Other program reviews such as technical reviews, technical manual reviews, etc. shall be combined into the PMR when possible. The Contractor shall also be responsible for generating minutes of the meetings and provide them to the Government for approval. The Contractor shall document action items due dates, coordinate resolution, and tracking of action items until closure.

Deliverable	Due Date / Frequency
Contractor's Progress and Management Report (DI-MGMT-80227)	Initial: 30 days after award Subsequent: Monthly (by 10 th working day after month's end)

1.3 Integrated Project Teams (IPTs)

The Contractor shall collaborate with the Government to define, document, implement, and maintain an Integrated Product Team (IPT) structure for the duration of the contract. The purpose of an IPT is to bring together all the functions and stakeholders, including other

Contractors and Government personnel, in the performance of a product or process and concurrently make integrated decisions affecting that product or process. Each IPT shall prepare the required planning documents for the system element to which it is assigned; shall be responsible for developing and satisfying the specifications and baselines associated with the element; and shall complete the work outlined in tasking statements related to the element, including the technical reviews.

1.4 Integrated Master Schedule (IMS)

The Contractor shall develop and maintain an Integrated Master Plan (IMP) that shows planned efforts to achieve each significant accomplishment and event relating to the program. As part of the IMP, the Contractor shall develop and maintain an Integrated Master Schedule (IMS) that contains the planned events and milestones, accomplishments, exit criteria, and activities from contract award to the completion of the contract. The Contractor shall quantify risk in hours, days, or weeks of delay and provide the most likely duration for each IMS activity and event.

Deliverable	Due Date / Frequency
Integrated Master Schedule (DI-MGMT-81650)	Initial: 30 days after award Subsequent: As required throughout PoP

1.5 Configuration Management

The Contractor shall implement an internal Configuration Management (CM) system for identification, control, configuration status accounting, and auditing of all configuration documentation and software representing or comprising the product. The Contractor shall implement CM to maintain the integrity of the components, products, and assets throughout the system life cycle. CM shall be implemented throughout the entire period of execution for all components, products, and assets. CM shall identify, track, and document Configuration Items (CIs), control the CIs and changes to them, and record and report status and change activities to these CIs. The Contractor shall use an automated internal CM process to monitor and control all configuration documentation, physical media, and physical parts representing or comprising the system CIs. The Contractor will plan and implement an automated CM function to perform configuration control, configuration identification, audits, and status accounting in a system-engineering environment. This specific automated CM approach, developed by AVT, is foundationally built within an Atlassian environment using Bamboo, and incorporates automated regressive testing into the entire Continuous Integration Process. As proven through successful implementation with the AVCATT program, this solution offers dramatic benefits to iterative development through build-level customizability. By giving development teams the ability to configure automation for each individual build and build element, this yields increased responsiveness to the emergent challenges that often face CM operations. The Contractor will develop, maintain, and execute CM procedures and processes for control of all software baselines. CM will be conducted on the Lab assets and fielded assets.

1.6 Risk Management

The Contractor shall provide a Risk Management Plan to include risk management tasks, responsibilities, activities for the purpose of identifying risks, estimating impacts, and creating response plans to mitigate. The Contractor shall update the DHA SPEARPOINTS Risk Management Plan by identifying, documenting, analyzing, and prioritizing risks associated with the SPEARPOINTS program. The Contractor shall support the development of management

strategies to handle those risks and monitor the health of the SPEARPOINTS throughout its life cycle.

The Contractor shall identify and report issues and risks associated with SPEARPOINTS program, and report risks/issues and status of any mitigation actions in the Monthly Progress Report, and at Program Management Reviews, technical reviews, and program milestones. The report shall identify any problems/issues/challenges/risks that arose and a description of how the problems were resolved. If problems/issues/challenges/risks have not been completely resolved, the Contractor shall provide an explanation, including their plan and timeframe for resolving the problems/issues/challenges/risks. It is expected that the Contractor will keep in communication with the Government accordingly so that problems/issues/challenges/risks that arise are transparent to both parties to prevent escalation of outstanding problems/issues/challenges/risks.

1.7 Quality Management

The Government intends to utilize a Quality Assurance Surveillance Plan (QASP) to monitor the quality of the Contractor's performance to ensure that service levels reach and maintain the required levels throughout the contract period of performance. The QASP provides the Contracting Officer Representative (COR) with a proactive way to avoid unacceptable or deficient performance. The QASP will be finalized immediately following award, and a copy provided to the Contractor after award. The QASP is a living document and may be updated by the Government as necessary.

To ensure that the requirements of the contract are met, the Contractor shall manage the quality of the finished product via industry-accepted best practices in accordance with ISO 9001:2015 and with the Contractor's internal processes. The Government will evaluate the Contractor's performance of this order. For those services listed in the QASP, the COR will primarily follow the method of surveillance specified in this order. When an observation indicates defective performance, the COR will require the Contractor manager or representative to initial the observation. The initialing of the observation acknowledges that he or she has been made aware of the defective performance and does not necessarily constitute concurrence with the observation. Government surveillance of services not listed in the QASP or by methods other than those listed therein may occur during the performance period of this order. Such surveillance will be done according to standard inspection procedures or other order provisions.

The Contractor shall prepare and adhere to a Quality Control Plan (QCP). The QCP shall document how the Contractor will meet and comply with the quality standards established in this statement of work. At a minimum, the QCP must include a self-inspection plan, an internal staffing plan, and an outline of the procedures that the Contractor will use to maintain quality, timeliness, responsiveness, and customer satisfaction.

Performance Objective	PWS Reference	Performance Standard	Performance Threshold	Method of Surveillance
Quality of Deliverables	PWS Paragraph 1.7	Submit in accordance with the Contract Data Requirements List (CDRL)	80% acceptability on first submission	100% Inspection
Timeliness of Deliverables	PWS Paragraph 6	Submit on time in accordance with CDRL	100% on time	100% Inspection

Performance Objective	PWS Reference	Performance Standard	Performance Threshold	Method of Surveillance
Manage Schedule	PWS Paragraph 1.4	Meet completion dates established by the approved schedule in the Integrated Master Plan	No more than 10 calendar days behind schedule.	100% Inspection
Prototype Development and Installation	PWS Paragraph 2	Meet completion dates established by the approved schedule in the Integrated Master Plan	No more than 10 calendar days behind schedule.	100% Inspection
Operations and Maintenance Services	PWS Paragraph 3	Provide responsive and effective services	No more than one COR validated customer complaint for duration of the contract.	Customer Complaint
Testing and Training Support	PWS Paragraph 4	Provide responsive and effective services in compliance with training standards	No more than one COR validated customer complaint for duration of the contract.	Customer Complaint

1.8 Data Rights

The Government will retain rights to all data produced in the course of developing, deploying, training, using, and supporting DHA or other federal agencies that utilize this order.

All non-technical data (i.e., data not falling under the definition of “technical data” as defined in DFARS 252.227-7013 (a) (15)) received, processed, evaluated, loaded, and created as a result of this contract shall remain the sole property of the Government and shall be returned to the Government at the conclusion of the contract unless the contracting officer grants a specific exception. Pursuant to DFARS 252.227-7013 (b) (4), 252.227-7014 (b) (4) and DFARS 252.227-7020, the Awardee agrees that any and all technical data (as defined in DFARS 252.227-7013 (a) (15)), computer software (as defined in DFARS 252.227-7014 (a) (4)), and computer software documentation (as defined in DFARS 252.227-7014 (a) (5)) generated pursuant to the performance of this task order by Contractor personnel will be the property of the United States Government. Neither the Awardee nor its personnel shall have an ownership interest in the technical data, computer software, or computer software documentation herein described. The proposed solution will not be using any third-party or imported data or datasets otherwise outside the aforementioned scope. The sole exception to this is the Joint Trauma Registry, which use is mandated by the terms of the solicitation, and which is already the property of the Government.

Teammate SIMETRI is supplying only Commercial Off the Shelf (COTS) items from their catalog. These COTS PTT/module components will be integrated with the Laerdal manikins or used as stand-alone PTTs, if desired by the Government. SIMETRI is not transferring data rights of these COTS components just as Laerdal will not be transferring data rights with the integration of their manikins.

Prior to the inception of any work under the task order, the Contractor shall disclose to the ordering Contracting Officer and ordering office any technical data or non-commercial computer software and computer software/source code documentation first produced, created, or generated

in performance of the task order and not required to be delivered under the task order that the Contractor identifies and asserts would be furnished with anything other than unlimited rights, or otherwise with any restrictions on use, release, or disclosure. Throughout the duration of performance, the Contractor further agrees that not later than thirty (30) days after the basis for any new or additional assertions are known, the Contractor shall disclose such assertions to the ordering Contracting Officer and ordering office.

Any such disclosure shall be made whether or not an express requirement for the disclosure is provided by the Government in the performance of this task order. Such disclosures shall indicate the rights asserted in the technical data and non-commercial computer software by the Contractor and rights that would be acquired by the government if the data or non-commercial software were required to be delivered under the task order and its CDRL requirements and any cost/price associated with delivery. Any such assertion shall include the basis for the assertion, in accordance with and in the format prescribed by clauses DFARS 252.227-7013 and 252.227-7014.

The disclosure requirements stipulated by this clause and those included under this task order also apply to segregable routines of non-commercial software that may be developed exclusively at Government expense to integrate Commercial Software components or applications provided under a commercial software license or developed to enable Commercial Software to meet requirements of the Task Order. This disclosure obligation shall apply to technical data and non-commercial computer software developed exclusively at Government expense by subcontractors under this Task Order. Performance of this disclosure requirement shall be considered a material performance requirement of any task order under which such technical data or non-commercial computer software is developed exclusively at Government expense.

1.9 Meetings and Other Program Management-Related Tasks

1.9.1 Task Order Kick-Off Meeting

The Contract shall conduct a Task Order Kick-Off meeting within 3 calendar days following the award date. The purpose of this meeting shall be to review the terms and conditions of the contract. The means and location of this meeting shall be determined after contract award. The Contractor shall provide meeting minutes within 2 business days after the meeting.

1.9.2 Technical Kick-Off Meeting

The Contractor shall conduct a Technical Kick-off meeting within 15 working days after contract award. The purpose of the conference shall be to establish the framework of the Contractor and Government interaction during the performance period of the contract. The Contractor shall emphasize the operating procedures, methodologies, and processes to be used in the execution of the contract. The Contractor shall develop and present a program IMS, IPT structure, management concept, organizational structure, and the interfaces with the Government that are employed to perform the DHA SPEARPOINTS mission. The Contractor shall document action items and due dates, coordinate resolution, and track action items until closure. Action item closure shall require Contractor and Government approval.

1.9.3 Site Survey

Within 10 days after the kickoff meeting, the Contractor shall, in collaboration with the Government, schedule and execute a site survey of the 5th SFG(A) facility at Fort Campbell, KY to document existing equipment, facility use and mapping, and on-site capabilities.

1.9.4 Technical Interchange Meetings

The Contractor shall support weekly Technical Interchange Meetings (TIMs). A TIM shall address specific topics or issues, address status of development or test activities between management reviews, address the functions of an established working group, or coordinate and provide guidance for engineering data or technical publications.

2 Prototype System Development and Installation

The Contractor shall use the requisite technical expertise to complete the required technical tasks of the contract and to meet the requirements as defined within this PWS. The Contractor shall take into consideration the physical constraints of the facility. The Contractor shall design, develop, integrate and test Commercial Off-the-Shelf (COTS) components into a full operational capability SPEARPOINTS prototype system.

The Contractor shall develop and install the SPEARPOINTS prototype system that, at a minimum, provides:

- a. A capability for SOF teams to train individually or collectively on SOF medical critical tasks.
- b. A capability to stress the operational planning and execution of a SOF mission when also faced with one (1) or more critical care patients in a simulated operational or contingency environment.
- c. A capability that replicates an in-theater safe house/team house environment.
- d. A Point of Injury capability that addresses solutions to support sustainment of Tactical Combat Casualty Care (TCCC) First Responder, 68W, Special Operations Combat Medic (SOCM), and 18D Module task lists.
- e. Surgical skills capability to support sustainment of surgical skills for both individuals and teams, including forward surgical teams and non-surgeons, in austere environments.
- f. A capability to assess the training operations necessary to conduct SOF treatment/evacuation execution based on the SOF medical critical tasks areas such as, Treat and maintain superficial compartment syndrome, Circumferential burns, Tension Pneumothorax, Hemothorax, Ballistic injuries, Soft tissue injuries, Open and closed thoracic trauma, Open and closed abdominal trauma, Open and closed head injuries, Compressible and non-compressible hemorrhage, Complete and partial limb amputations, Shock management, Whole blood and blood products administration, Monitoring intakes and outputs (I&Os), Provide fluid replacements (IV and IO infusions), and Provide patient cleaning and positioning.
- g. A capability to train Special Operations Forces Baseline Interoperable Standards Critical Task Areas such as, Trauma Assessment, Casualty Movement & Evacuation, Massive Hemorrhage Control, Airway Management, Respiratory Management, Shock and Resuscitation, Hypothermia Management, Advanced Cardiac Life Support (ACLS), Medication Administration, Documentation, Laboratory and Diagnostic Procedures, Abdominal and Genitourinary Trauma, Burns, Medical Assessment and Physical Examination, Nursing Care, Wound Care, Compartment Syndrome, and Planning.

- h. The capability for SOF units to render medical care at Point of Injury.
- i. A capability to build scenarios guided by the use of the Joint Trauma Registry, in order to facilitate training of historically significant patients addressing both common and unique medical scenarios.
- j. Prescribed Medical Courses to support re-fresher of Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Pediatric Education for Prehospital Providers (PEPP).
- k. Configurable high-fidelity patient simulators (HFPS) to interface with COTS Part Task Trainers, to provide the automation of training scenarios and generated physiological responses, requiring no remote instructor intervention for Amputations, Internal Abdominal Bleed, Abdominal Wound Packing, Humeral I/O, and Ultrasounds, with physiological changes displayed on the vitals monitor.
- l. Configurable high-fidelity patient simulators (HFPS) to interface with contractor designed and developed Part Task Trainers to provide the automation of training scenarios and generated physiological responses, requiring no remote instructor intervention for Escharotomy, Fasciotomy, Central Line Infusion, and Lateral Canthotomy & Cantholysis (LCC), with physiological changes displayed on the vitals monitor.
- m. A capability in the prototype operational system for asset management, exercise control and, After Action Review (AAR) of training events.
- n. The capability to use soldier provided Medical Tactical Equipment Set (TACSET) and the SOCOM TCCC Evacuation Set common to SOF Teams, such as the Tribalco Integrated Casualty Set.
- o. The Integration of the Battlefield Assisted Trauma Distribution Observation Kit (BATDOK) capability into the prototype operational system.

2.1 Systems Engineering

The Contractor shall ensure the timely integration of engineering specialties such as reliability, maintainability, logistics engineering, value engineering, standardization, and transportability into design and development. The Contractor shall apply a systems engineering process during each level of system development (system, subsystem, and component) to add value to the products defined in the application of the process. The Contractor shall implement a system engineering process that transforms all system requirements into a set of lower-level functional requirements that define the prototype system. The Contractor shall generate and maintain a Systems Requirements Document (SRD). The Contractor shall establish the definition of the system with a focus on system products required to satisfy operational requirements. The documentation generated during the system definition shall be used to guide system and subsystem development. The Contractor shall perform trade-off analysis and make every effort to identify COTS technologies that can be baselined and integrated into a final product/solution. The Contractor shall document the prototype components, subsystems, and interfaces, to include

system physical architecture diagrams delineating physical interfaces and functional architecture diagrams delineating functional interfaces, wireline protocols, file formats, cable pinouts, connector types, etc. The system engineering effort shall integrate all elements of a multifunctional engineering effort to meet the system requirements, and shall include future requirements to lay out a system roadmap for future enhancements to be integrated into the prototype system. The Contractor shall complete the system, product, and subsystem interface requirements and verification definition, system and product requirements and verification definition, and preliminary subsystem requirement and verification definition, establish a system baseline, and complete technical reviews.

2.2 Hardware Engineering

The Contractor shall identify, document, and procure the appropriate computer systems, training specific hardware/systems, and specialized training support equipment required for the SPEARPOINTS effort. The identification of all hardware will be done in accordance with the requirements derived through the systems engineering process described in section 2.1. The Contractor shall identify computer systems hardware as well as system boundaries so that the cybersecurity issues are easily isolated and controlled from the beginning and with the smallest number of systems exposed to external boundaries.

The Contractor shall identify the required HFPS, Part Task Trainers (PTT), and physical training modules, which will be integrated into the HFPS and PTTs to facilitate training. The Contractor shall conduct appropriate hardware design, development, and engineering to ensure that physical interfaces are compatible or adaptable to the HFPS or PTT interfaces. The contractor will optimize the configuration of configurable HFPS in each room to ensure that they are meeting the current training requirements. The HFPS will be configured so that the current training objectives are met. Optimal configurations for the manikins in each room are presented to the trainees for the course objectives. The contractor will optimize the wound configurations in each room and on each manikin to reduce overexposing the trainee to injuries that are not germane to current course objectives. Reconfiguration of the HFPS will be conducted by the I/O as the installation of each module is designed to integrate with the electrical, mechanical, fluid, and air interfaces inherent in the manikin.

The Contractor shall ensure that software interfaces between the HFPS, PTTs, and training modules, where applicable, adhere to the software interfaces required by the software baselines of the SPEARPOINTS training systems environment. The following table lists the integrated Part Task Trainers with respective manikin control interface/ mechanism, physiological interface/ interaction, and level of integration:

Training Module	Manikin Control Interface/ Mechanism	Physiological Interface/ Interaction	Level of Integration
Amputation	The amputations attach to the blood supply of the manikin and when a tourniquet is applied properly a physical block of the blood flow is achieved. A specific scenario representing the injury is developed to route and establish the initial blood flow to the wound	When the scenario begins the blood flows from the amputation wound and the corresponding blood pressure drops while heart and respiratory rates increase until the flow of blood is stopped, and the patient is stabilized. These physiology changes can be seen in the vitals display.	This interaction is autonomous and requires no remote intervention from the instructor
Abdominal	The abdominal wound packing	When the scenario begins the	This interaction is

Training Module	Manikin Control Interface/ Mechanism	Physiological Interface/ Interaction	Level of Integration
Wound Packing	module attaches to the blood supply of the manikin and when fully packed a physical block of the blood flow is achieved. A specific scenario representing the injury is developed to route and establish the initial blood flow to the wound	blood flows from the abdominal wound and the corresponding blood pressure drops while heart and respiratory rates increase until the flow of blood is stopped, and the patient is stabilized. These physiology changes can be seen in the vitals display.	autonomous and requires no remote intervention from the instructor
HHIO Arm	The HHIO Arm will be developed with an RFID antenna and processing subsystem that communicates with the Laerdal manikin SDK. The HHIO Arm is planned to be fully integrated and the internal manikin physiology changes correspond to the specific fluids or medications injected, which are communicated through RFID tag on the syringe at or near the injection site.	The medication interface receives the type and dosage of the fluid received through the HHIO insertion site. These physiology changes associated with the fluids or medication delivery can be seen in the vitals display.	This interaction is autonomous and requires no remote intervention from the instructor
Escharotomy Vest	Specific training scenario developed so that the manikin physiology mimics a patient with circumferential 3 rd degree burns and compartment syndrome in the torso, restricting the patient's ability to breath	The scenario alters the breathing of the patient by restricting the rise and fall of the chest and the corresponding O2 levels of the patient. These physiology changes can be seen in the vitals display. Once the proper incisions are made the respiratory rate will increase to a normal or closer to normal rate and the oxygenation of the blood will improve. A more pronounced rise and fall of the chest will also return.	Physiology and physical changes will occur with no interaction from the instructor. Once the correct incisions on the vest have been detected and communicated through the Leap SDK, the scenario is modified, and the physiology and physical breathing changes are applied by the software systems.
Fasciotomy Leg	Specific training scenario developed so that the manikin physiology mimics a patient with compartment syndrome in the lower leg extremity. The fluids contained in the fasciotomy leg are self-contained, meaning there is no connection with the manikin blood supply. The fluids in the fasciotomy leg are intended to provide added realism but not require the trainee to control bleeding as the focus on the procedure is to recognize the anatomy and release the appropriate compartments.	The scenario increases heart rate, decreases blood pressure, and increases respiratory rate corresponding to a patient experiencing compartment syndrome. If the condition is not corrected these levels deteriorate over time representing a sepsis condition that can lead to septic shock. These physiology changes can be seen in the vitals display. Once the proper incisions in the skin and fascia for each compartment have been made, the pulses will return in two locations (ankle and foot). The physiology	Physiology and physical changes will occur with no interaction from the instructor. Once the correct incisions in the skin and fascia have been detected and communicated through the Leap SDK, the scenario is modified, and the physiology and physical pulse changes are applied by the software

Training Module	Manikin Control Interface/ Mechanism	Physiological Interface/ Interaction	Level of Integration
	The proposed Fasciotomy Leg will be updated with an electronics package that will detect when all four compartments of the lower leg have been released. This information will be communicated to the manikin physiology through the LEAP SDK from the electronics contained in the fasciotomy leg or remotely within the manikin torso. The leg will also be equipped with pulse bladders in the ankle and foot so that when the compartments have been released the pulse will return to those areas.	will stabilize. Although not an immediate change, the blood pressure should stabilize. The respiratory and heart rates may increase after the procedure because now that the blood supply has returned to the extremity, pain receptors also begin to function properly, and the natural response would be to see an increase in heart and respiratory rates based on increased pain experienced by the patient.	systems.
Central Line Module	<p>A Central Line training module will be developed as a replacement vest for the Laerdal manikin as well as a wrist access point. The Central Line placement on the vest will utilize the subclavian vein access location, allowing the line to be placed and medications introduced on the right side of the torso. Additionally, a wrist access location will be provided for arterial access and the ability to simulate arterial blood gas draws for advanced diagnostic evaluation of a casualty in Prolonged Field Care scenarios.</p> <p>*The wrist access location will be added to the HHIO Arm described above. A small bladder will be installed in the forearm allowing for flashback when the needle/catheter is introduced. An additional RFID antenna will be added to the wrist area to detect if medications are being introduced at this location as required. The wrist location will be utilized for blood gas draws.</p>	The medication interface receives the type and dosage of the fluid received through the central line insertion site. These physiology changes associated with the fluids or medication delivery can be seen in the vitals display. The RFID antenna near the insertion site reads type and dosage information from the RFID Tag on the medication or fluid delivery mechanism (fluid bag, syringe, etc.). The specific information is communicated through the Leap SDK and the scenario and physiology are then updated.	This interaction is autonomous and requires no remote intervention from the instructor. Corresponding physiological changes can be noted in the vitals display.
Lateral Canthotomy & Cantholysis (LCC)	An LCC module will be developed based on the current head structure of the Laerdal manikin. One of the eye sockets will be retrofitted with a Sonalyst LCC eye module and the entire head skin will be replaced with a custom developed face/head skin. The LCC module will contain an interface allowing for an electronics package to read the state of the module (released or not) and	Once the LCC procedure has been completed the module will communicate the status of the tendon release. This information will be communicated to the manikin physiology through the LEAP SDK. Specific changes to the physiology may be limited or subtle because the LCC procedure is performed to save the eye when trauma has occurred causing	This interaction is autonomous and requires no remote intervention from the instructor. Corresponding physiological changes can be noted in the vitals display.

Training Module	Manikin Control Interface/ Mechanism	Physiological Interface/ Interaction	Level of Integration
	communicate that through the LEAP SDK. Corresponding physiology can then be updated as appropriate in the manikin's physiology engine.	pressure to build cutting off the blood supply to the eye. The underlying trauma may still be the main driver of the manikin physiology at this point in the scenario.	
Ultrasound	Ultrasound capabilities are provided on the Laerdal manikin through a manikin vest and ultrasound wand that uses RFID technology to display programable ultrasound images based on the location of the wand on the vest of the manikin	This is an inherent capability of the Laerdal manikin when fitted with this optional package, which was proposed as part of this effort.	This interaction is autonomous and requires no remote intervention from the instructor.

The Contractor shall identify the required training support equipment utilized to augment and enhance training within the SPEARPOINTS environment. This equipment facilitates environmental effects such as smoke, smell, and lighting effects. This equipment also provides for the recording and playback of video and audio for after-action reviews. The support equipment may also include all of the required infrastructure equipment used for the mounting, interconnection, and routing of data throughout the system.

2.3 Software Engineering

The contractor shall utilize available COTS software applications to develop the SPEARPOINTS baseline. The contractor shall develop in-house software applications when COTS solutions are unavailable. The Contractor shall create and maintain a product repository under Configuration Management to house the SPEARPOINTS prototype software and related project documentation. The Contractor shall be responsible for ensuring overall software functionality and compatibility with COTS items within the TDP, should changes to the product baseline become necessary during the life of the contract. The Contractor shall document prototype design and changes to the software design and/or interface design in the appropriate documentation. In order to ensure the integrity and functionality of the SPEARPOINTS software baseline, the Contractor shall provide the relevant expertise to maintain and manage the software baseline configuration in an operable condition, ensure overall system functionality, support on-site system hardware/software integration, and support acceptance testing at the training site.

These services normally encompass but are not limited to, software analysis, software design, software development, software production, software testing, and software documentation. The Contractor shall develop the system software using the Contractor's organizational software development practices. The Contractor shall conduct market surveillance and market investigations to maximize the use of open source software, commercial software, and non-developmental software. The design process shall incorporate features that promote the assessment of open source software products, ease of operation, Cybersecurity, ease of software maintenance, ease of future updates and modifications, data void work around, and also any smart designs that can justify a reduction in the amount of documentation. The Contractor shall design software, develop executable code, perform unit testing, and integrate software components (with each other and with hardware components) to meet system requirements as stated in the technical specification, System/Subsystem specifications, System/Subsystem design description, and Technical/Operator's manuals. Software design includes not only design to

requirements, but selection of existing software products, including open source software to meet system requirements, and iterating the requirements to allow the use of existing products when indicated by cost as an independent variable (CAIV) or schedule as an independent variable (SAIV) trades. The Contractor shall employ well-defined security policy models, structured, disciplined, and rigorous hardware and software development techniques, and sound system/security engineering principles.

2.4 Hardware/Software Integration

The Contractor shall produce and integrate the subsystems into a complete system that meets the SPEARPOINTS prototype requirements. The Contractor shall resolve product deficiencies when specifications for the system, product, subsystem, assembly, or component are not met to achieve a fully functional system that performs and operates in accordance with the Technical Specifications. The Contractor shall verify the complete integration of the hardware and software of each hardware and software subsystem and the overall system through the utilization of Software Test Description (STD) and formalized test procedures. The Contractor shall specify the functional interface between the computer program products and any equipment hardware with which it must operate.

The Contractor shall identify and document all physical interfaces between HFPSs and training modules. The Contractor shall ensure that physical interfaces between the HFPSs and training modules are compatible or adaptable to each other for integration. The Contractor shall conduct and document any modifications required to integrate and automate the training modules into the configurable HFPSs. The Contractor will classify and document the interfaces for each physical connection identifying the mechanical, fluid, air, and electrical connections required for the integration. The Contractor will fully document any interface modifications in the systems' TDP.

The Contractor shall verify the complete integration of hardware interfaces for each of the training modules integrated with an HFPS or PTT through the use of a Hardware Test Description (HTD) and formalized tests of all physical connections between the two systems. Integration and test results are documented within the test document.

2.5 Cybersecurity

The Contractor shall integrate into their programmatic processes, document decisions, specify and track requirements, document assessment efforts, identify possible solutions, and maintain operational systems security in accordance with DoDI 8500.01, DoDI 8510.01.

All Cybersecurity and Cybersecurity-enabled products shall be securely configured in accordance with DoD approved security configuration guidelines. The Contractor shall obtain Security Technical Implementation Guides (STIGs) <http://iase.disa.mil/stigs/Pages/index.aspx> and implement each STIG into the design. As part of the system design and component selection process, Cybersecurity shall be considered as a requirement for all systems used to enter, process, store, display, or transmit information. Cybersecurity shall be achieved through the acquisition and appropriate implementation of evaluated or validated Government-Off-The-Shelf (GOTS) or COTS Cybersecurity and Cybersecurity-enabled IT products. All COTS Cybersecurity products and Cybersecurity-enabled products shall be certified compliant with National Security Telecommunications and Information Systems Security Policy Number 11 (NSTISSP-11) by labs accredited under the National Information Assurance Partnership (NIAP) Common Criteria Evaluation and Validation Scheme (CCEVS) or National Institute of Standards

and Technology (NIST) Federal Information Processing Standards (FIPS) Cryptographic Module Validation Program (CMVP). Similarly, GOTS Cybersecurity products or Cybersecurity-enabled products employed by the system shall be evaluated by the National Security Agency (NSA) or in accordance with NSA approved processes.

All Contractor employees and associated sub-Contractor employees shall complete the DoD IA Awareness Training before issuance of network access and annually thereafter. All Contractor employees working IA/IT functions must comply with DoD and Army training requirements in DoD 8570.01-M and AR 25-2 at the start of work. The Contractor shall secure all unclassified DoD information on Non-DoD information systems in accordance with DoDI 8582.01.

The Contractor shall develop and implement a Cybersecurity risk management process, which shall include security safeguards. These safeguards shall include but are not limited to, local policy and guidance, identification of threats, problems and requirements, and an adequate plan for the required resources. The Cybersecurity risk shall be addressed across the risk management process and can be addressed in multiple areas.

The contractor shall comply with DoDI 8582.01 “Security of Unclassified DoD Information on Non-DoD Information Systems,” and “Cybersecurity” and National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53/53a and NIST SP 800-37, Risk Management Framework (RMF) Guide for Applying the RMF to Federal Information Systems, as well as emerging DoD Cybersecurity policy designed to address evolving threats and submit requirements contained in Contract Data Requirements List (CDRL).

2.5.1 Cybersecurity Management Plan (CMP)

The Contractor shall plan, deliver, and implement a Cybersecurity Management Plan (CMP) containing documentation sufficient to demonstrate its systematic and organizational ability to provide solutions that include appropriate security controls for any task within the scope of the contract. The CMP shall also describe how these are related to the organization’s enterprise approach to risk management, and how its approach to cybersecurity risk management provides appropriate assurance for the types of deliverables it intends to provide under the contract. The CMP shall be a description of management controls, policies, and processes.

2.5.2 Risk Management Framework (RMF)

The Contractor shall address and implement the RMF for an expected Type III stand-alone connected system that has the appropriate security categorization levels for Confidentiality, Integrity, and Availability. The Contractor shall implement a defect correction process to timely address deficiencies identified by DHA J-6 within the final documents submission.

2.5.3 RMF Artifact Development

The Contractor shall produce all of the necessary artifacts to complete the RMF package, in accordance with the current versions of DoDI 8500.01, DoDI 8510.01, DoDM 8570.01, CNSSI 1253, and NIST SP 800-53, DoDI 8582.01, Rapid Tactical RMF Overlay Memorandum, DHA IPM 18-006; DHA IPM 18-013, and AR 25-2 to deliver and operate a fully accredited system that has the appropriate security categorization levels for Confidentiality, Integrity, and Availability. In addition, the Contractor shall reassess/rescan the system and update final documentation in order to correct deficiencies identified by the Government. The RMF package shall include documents defined within the RMF including, but not limited to:

- a. Appointment Letter
- i. Configuration Management Plan

- | | |
|---------------------------------|---|
| b. Boundary Diagram | j. SW/HW lists |
| c. Data Flow Chart | k. License tracking (maybe for AWS) |
| d. System Security Plan (SSP) | l. ATO-A for sites to sign |
| e. Interconnection agreements | m. Incident Response Plan |
| f. Scan reports | n. Ports/Protocols/Service logs |
| g. STIG checklists & deviations | o. Contingency Plan |
| h. AUPs | p. Program Actions and Milestones (POA&M) |

Deliverable	Due Date / Frequency
Scientific and Technical Reports – Cybersecurity Artifacts (DI-MISC-80711A)	Initial: 30 days prior to the ATO Test Event Subsequent: As required throughout PoP

2.5.4 Information Assurance Vulnerability Management Program (IAVMP)

As part of the Information Assurance Vulnerability Management Program (IAVMP), the Contractor shall document the incorporated and unincorporated Information Assurance Vulnerability Alerts (IAVAs), Information Assurance Vulnerability Bulletins (IAVBs), and Information Assurance Vulnerability Technical Advisories (IAVTAs). The IAVMP plan shall include but is not limited to identifying and assessing potential threats to determine risks. It also involves developing and implementing controls, countermeasures, or solutions. The Contractor shall monitor the system for compliance and success while evaluating and refining the IAVMP as necessary. The Contractor shall incorporate all applicable DoD and Department of the Army (DA) Information Assurance Vulnerability Management messages issued on behalf of the Department of Army G3, CIO/G6 and Joint Task Force-Global Network Operations. The Contractor shall provide justification for each unincorporated IAVMP message (i.e., describe the specific negative impact the IAVMP message incorporation would have on the system operation).

Recurring reports related to the IAVMP shall include, but are not limited to:

- | | |
|------------------------------------|---|
| a. Visitor Access Logs | g. Authorized users physical access log |
| b. Security Plan annual review log | h. Account access auth list |
| c. Maintenance log | i. Access control policy (and annual review) log |
| d. Incident response log | j. FISMA reviews |
| e. Maintenance plan review | k. IAVA patches (incl. unincorporated) patch tracking |
| f. Group account utilization log | |

Deliverable	Due Date / Frequency
Scientific and Technical Reports – Cybersecurity Recurring Reports (DI-MISC-80711A)	Initial: 30 days prior to the ATO Test Event Subsequent: As required throughout PoP

2.5.4.1 Establish Host-Based Security System (HBSS)

Host Based Security System (HBSS) compatibility and compliance shall be established for any system that touches the Army Network directly or indirectly, or has the capability to connect, providing network administrators and security personnel with mechanisms to prevent, detect, track, report, and remediate malicious computer-related activities and incidents across all DoD networks and information systems in accordance with the JTF-GNO released CTO 07-12 (HBSS mandating the deployment of HBSS on all Component Command, Service and Agency networks within DoD. All HBSS compliance and guidance will be coordinated through CIO Engineering Office (SEO).

2.6 Development of a Technical Data Package (TDP)

The Contractor shall develop/produce/maintain and deliver a Technical Data Package (TDP) that accurately depicts the final product. The TDP shall provide the necessary design, engineering, manufacturing, testing, and quality assurance requirements information necessary to enable the procurement or manufacture of an interchangeable item that duplicates the physical and performance characteristics of the original product without additional design engineering effort or recourse to the original design activity or any third party. The TDP shall represent the approved, tested and accepted configuration of the defined delivered item(s). This shall include software and all test requirement documentation data required to test systems, subsystems and/or components.

Deliverable	Due Date / Frequency
Software Product Specification (SPS) (DI-IPSC-81441A)	Initial: 30 days after delivery acceptance Subsequent: 15 days after any change to product baseline
Technical Data Package Index (DI-EGDS-80918)	Initial: 30 days after delivery acceptance Subsequent: 45 days prior to PoP end date

2.6.1 Software Product Specification

The Contractor shall develop a Software Product Specification (SPS) package that includes the baseline version of the executable SPEARPOINTS software fielded and its associated documentation. The SPS package shall include the SPS document, the executable software, source files, source code, and any Application Programming Interface (API) specifications. The package shall also include detailed instructions on how to install and run the SPEARPOINTS software, systems requirements, and any special processes or procedures required for a successful installation and execution of the software.

2.6.2 Product Definition Data (PDD)

During the systems engineering and design Contractor shall develop, produce, and maintain PDD that accurately depicts the final product. The PDD is a technical description of items adequate for acquisition strategy, production, engineering, and logistics support. The PDD shall maintain complete design, logistics, manufacturing requirements, and the means of measuring compliance with the requirements. Piece part information (e.g., drawings, computer-aided design files, and metadata) and associated lists shall provide the design, engineering, manufacturing, and quality assurance requirements information necessary to enable the procurement or manufacture of an interchangeable (form, fit, function) replacement for the original product.

2.7 Technical/Design Reviews

The Contractor shall conduct Technical Design Reviews (TDRs), as appropriate. The TDRs shall be a formal technical review of the basic design approach, the allocated baseline, and changes made to the allocated baseline. The TDRs shall cover the progress and technical adequacy of the selected design approach. The TDRs shall allow the Government to evaluate the technical risk associated with the selected design approach. The TDRs shall include a subsystem block and functional diagram, design standards and logistical considerations (including training and manuals), and interference analysis.

2.8 Product List for all Commercial Items Used to Develop the Prototype System

The product list for all commercial items used to develop the prototype system has been provided as Attachment 1 to this PWS.

3 Operations and Maintenance

This section shall contain the offeror's proposed logistics efforts necessary to ensure that the operations and maintenance requirements of this contract are accomplished to include, at a minimum:

3.1 Logistic Support Analysis (LSA)

The Contractor shall analyze SPEARPOINTS prototype logistics requirement to develop supporting structures and optimize support infrastructure for prototype development and deployment of the SPEARPOINTS system. The recommended support resources shall be sufficient to allow another Contractor with comparable skills to assume operation, maintenance, and support of the system and sustain system availability to the same standards as the product baseline. The Contractor shall use the form, fit, function, and interface requirements in the TDP for provisioning, training, and maintenance planning.

3.2 Supportability Analysis and Logistics Management Information

Logistics Product Data (LPD) is a subset of Product Support Analysis documentation. The Contractor shall develop, as a baseline, the Logistics Product Data for the SPEARPOINTS system. The Contractor shall establish and maintain a LPD database in accordance with GEIASTD-0007 and the requirements contained in the SRD. The LPD database shall be used to satisfy applicable and related data items as specified in the CDRL and LPD data product worksheets. The Contractor shall provide the Government access to their online LPD account

3.2.1 LPD Summaries/Reports

As the SPEARPOINTS baseline is developed, the Contractor shall be responsible for entering any data to the Attribute Selection Sheet required to generate the following reports:

- Maintenance Allocation Chart (LSAR-044)
- Authorization List Items Report (LSAR-040)
- Task Code to SMR Code Verification Report (LSAR-068)
- Bill of Materials Report (LSAR-080)
- Preventive Maintenance, Checks and Services product (LSAR 033)
- Indentured Parts List (IPL) Product
- Common and Bulk Items List Product

Deliverable	Due Date / Frequency
Logistics Product Data (DI-SESS-81758)	Initial: 15 days after completion of testing Subsequent: 30 days after completion of testing, final 30 days prior to PoP end date

3.3 Logistics Support Concept

In support of SPEARPOINTS and preparation of plans, the contractor will prepare a Concept of Logistics Statement (COLS) to establish priorities of support across all phases of prototype development, operations and maintenance, and testing and training. The COLS will include a Logistics Estimate that informs the COLS of planned work and analysis of how core logistic functions affect the various phases. The COLS will support sustainment of SPEARPOINTS operational capabilities and will address life-cycle support planning and actions to assure sustainment and performance across all phases. A performance-based product support process will be used to align the support activities necessary to meet SPEARPOINTS objectives. The

COLS will ensure that the system is to be available for use for 4-72 hours per exercise event for 45 weeks per year to train no more than two teams of up to 15 trainees per class.

3.4 Recommendation of Spares

The Contractor shall analyze the SPEARPOINTS design per the TDP and present a recommended spares list for Government approval. The Contractor shall deliver a complete set of approved spares (approximately 10% of system components) concurrent with the shipping and staging of equipment at the government site. Spares shall be packed and delivered with each unit to the SPEARPOINTS facility location.

Deliverable	Due Date / Frequency
Proposed Spare Parts List (DI-ILSS-80134A)	Initial: 30 Days after Delivery Acceptance Subsequent: 30 days after completion of testing

3.5 Development of Disposal Procedures

The Contractor shall perform analysis to identify disposal procedures associated with the SPEARPOINTS system focusing on those components, assemblies, sub-assemblies, parts, and materials that contain hazardous materials, wastes, and pollutants. The analysis shall also identify those items that can be recycled, reused, or salvaged. Analysis results will be utilized to build a Disposal Procedure Plan to incorporate disposal procedures for hazardous materials associated with SPEARPOINTS.

3.6 Unique Identification (IUID) Marking and Verification

The Contractor shall identify new equipment and repairable items with a cost greater than \$5,000; all Line Replaceable Units (LRU) and hardware configuration items; Special Test Equipment; Special Inspection Equipment; Special Tooling; and embedded subassemblies and components or parts that may be serially managed, that are mission essential or are controlled inventory items. The Contractor shall perform an engineering analysis required to determine the appropriate method for marking each item that requires unique identification. For such items as approved by the Government, the Contractor shall provide DoD unique item identification. Exceptions to marking items for which IUID is mandated prior to delivery to the Government, if granted by the Government, will be processed as specified in DFARS 211.274-2

Deliverable	Due Date / Frequency
Unique Identification (IUID) Marking and Verification Report (DI-MGMT-81858)	Initial: 30 Days prior to completion of testing Subsequent: 30 days after completion of testing, with final submission 30 days prior to PoP end date

3.7 Development of Technical Publications and Manuals

The Contractor shall develop technical publications as required. The Contractor shall prepare Operator and System Maintenance Manuals that provide instructions suitable for use by the intended audience of the system. The Contractor shall describe each operation and maintenance task in detail and in logical, systematic steps for the work to be accomplished. The operations and maintenance instructions shall accurately provide the technician with all the information needed to keep the equipment operational. The Operator Manual shall also include operator maintenance tasks such as preventive maintenance checks and services, inspection, lubrication, adjustment, and operator level repair and replacement tasks as needed. The Contractor shall identify and document maintenance tasks for both levels of the maintenance concept. The Contractor shall identify all required spare parts, consumables, tools, and test/support equipment

associated with each task and identify the level of maintenance at which each task shall be performed. The technical publications and manuals also shall provide system and subsystem-oriented instructions for installation, operation, maintenance, and testing. All tools, test equipment, and consumable items required to accomplish any maintenance or installation shall be identified just prior to and as part of the task. Government-furnished material, Government technical manuals, or Government-approved commercial operation and maintenance manuals shall be used as references for system and subsystem maintenance. All Government technical manuals and COTS manuals shall be reviewed to ensure changes, updates, revisions, or supplementation is not required to reflect the components actually being installed. All publications shall reflect the configuration of fielded hardware, as documented in the product baseline.

Deliverable	Due Date / Frequency
Page-Based Technical Manuals (MIL-STD-40051-2B)	Initial: 30 days after delivery acceptance Subsequent: 30 days after completion of testing
Production Drawings and Associated Lists (DI-SESS-81000E)	Initial: 30 Days after delivery acceptance Subsequent: 30 days after any change to product baseline
Commercial Drawings and Associated Lists (DI-TMSS-80527C)	Initial: 30 Days after delivery acceptance Subsequent: 30 days after completion of testing

3.7.1 Commercial-Off-The-Shelf (COTS) Manuals

The Contractors shall deliver, compiled in a consolidated binder, COTS manuals specific to the design, operation and maintenance requirements for each of the devices delivered.

3.7.2 Operator User's Manual (OUM)

The Contractor shall develop an OUM documenting tasks as necessary to operate the system. The Contractor shall identify and document operator-specific tasks for preventive maintenance checks, inspection, lubrication, adjustment, and operator level repair and replacement tasks. The Contractor shall identify all required spare parts, consumables, tools, and test/support equipment associated with the operation and operator's preventive maintenance tasks.

3.7.3 System Maintenance Manual (SMM)

The Contractor shall develop a SMM documenting tasks as necessary to maintain the system. The Contractor shall identify and document maintainer specific tasks for detailing installation, fault isolation, LRU procedures, software update procedures, and all necessary maintenance procedures to maintain the trainer. The Contractor shall identify all required spare parts, consumables, tools, and test/support equipment associated with the maintenance tasks.

3.7.4 New Equipment Training (NET) Documentation

The Contractor shall create NET documentation to define, develop, and conduct training for users/operators to understand the functional and operational capabilities. The Contractor shall provide training system documents required to support setup, installation, configuration, and operation of system software and hardware, system tools, techniques, methodologies, and sustainment. The Contractor shall create a complete and exportable training support package that integrates training products, materials, and other pertinent information necessary for system training. The Contractor shall create this training support package using Instructional Systems Design (ISD) processes.

3.8 Development of Training Materials

The Contractor shall create documentation, define, develop, and conduct for users/operators to understand the functional and operational capabilities. The Contractor shall provide training and training system documents required to support setup, installation, configuration, and operation of system software and hardware, system tools, techniques, methodologies, and for sustainment. The Contractor shall update a complete and exportable training support package that integrates training products, materials, and other pertinent information necessary for system training. The Contractor shall update this training support package using ISD processes.

The Contractor shall develop training materials to:

1. Stress the operational planning and execution of a SOF mission when also faced with one (1) or more critical care patients in a simulated in-theater safe house/team house environment.
2. Include Point of Injury (POI) that addresses sustainment of Tactical Combat Casualty Care (TCCC) / Damage Control Resuscitation (DCR) for the First Responder, 68W (Combat Medic), SOCM (68WW1), and 18D (SFMS) medical critical tasks list.
3. Include Damage Control Surgery (DCS) skills for individuals and teams, including Forward Resuscitative Surgical Teams (FRST) and non-surgeons, in austere environments.
4. Assess training operations based on the SOF medical critical task list (RFP Appendix A).
5. Provide re-fresher of Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Pediatric Education for Prehospital Providers (PEPP)
6. Maximize the use of the equipment and supplies available in the SF Tactical Medical Sets (CA, Trauma, BATDOK etc.) from the units, instructing in the didactic, hands-on/psychomotor, and field exercise environment with high and low fidelity mannequins and task trainers.
7. Ensure AARs are conducted daily and documented with audio/video recording of training events for playback discussion.

Deliverable	Due Date / Frequency
Training Materials (DI-ILSS-80872)	Initial: 30 days prior to first fielding acceptance Subsequent: upon request, and final 30 days prior to end of PoP

3.9 Commercial Licenses and Warranties

The Contractor shall provide commercial licenses and warranties of one year in length from delivery acceptance. All warranty information associated with all procured items shall be delivered at the time of fielding. The warranty product data shall include, at a minimum: manufacturer's point of contact, CAGE codes, length of warranty, and any special warranty provisions.

3.10 Shipping, Inspecting, and Staging of Equipment

The Contractor shall be responsible for shipping, inspecting, and staging of the equipment at the Ft. Campbell, KY facility prior to installation. The Contractor shall assist the Government during site inventory of all system equipment.

3.11 ICS and Transition Planning

The Contractor shall provide Interim Contractor Support (ICS) consisting of helpdesk support and onsite assistance, if required. The Contractor shall provide system/configuration

management necessary to perform ICS of the SPEARPOINTS system. The Contractor shall troubleshoot/document problems and track warranty periods for all installed system hardware while also processing warranty claims for any item required to be returned to the vendor. This includes all administration necessary to identify and resolve issues with faulty equipment expediently.

At the end of this order, but before final expiration, Contractor shall provide support for the transfer of SPEARPOINTS responsibility to the Government or another Contractor. Support shall include those services required to ensure the effective, efficient transfer of responsibility as well as technical data, tools, and test equipment and repair and spare parts, in sufficient detail and coverage to enable other personnel with comparable skills to the SPEARPOINTS tasks as listed in this order.

Appropriate task management personnel shall meet with the successor Contractor and/or Government to coordinate task transition. Discussions shall include personnel transition to the successor Contractor, and the transition of task-specific items such as Government or Contractor furnished supplies, materials, equipment, and services. The Contractor shall disclose the necessary information to allow the successor to conduct employment interviews for possible transition. If selected employees are agreeable to the change, the incumbent Contractor shall grant release at a mutually agreed date and negotiate the transfer of the employee's earned fringe benefits.

3.12 Site Activation

The Contractor shall uncrate, assemble, and test all training aids and materials, inventory all supplies; install and test all environmental systems and simulators, and install and test all Audio/Video (A/V) equipment including cameras, microphones, and monitors. The Contractor shall test the mock progression and flow of students through developed scenarios, utilizing all simulation systems, A/V systems, and haptic feedback systems. This scheduled framework gives the Contractor and Government a visual check of all systems and scenario(s) for SPEARPOINTS. Adjustments to further validate the Government requirements and simulation systems will continue to progress in this framework. The Contractor shall develop test procedures for and conduct a Government Acceptance Test (GAT) at the SPEARPOINTS prototype facility after the installation of the prototype system to validate that all installed configuration items operate in accordance with the SPEARPOINTS prototype requirements. A test coordination meeting shall be held between all stakeholders prior to the GAT, and testing shall be conducted by Government and Contractor personnel, and in accordance with approved test procedures. The Contractor shall document all test discrepancies from the GAT and track the failure analysis and corrective action for each test discrepancy until correction and regression tests are successfully completed. The Contractor shall establish a suspense system to ensure timeliness of analysis and corrective action of each test discrepancy. Upon correction of each discrepancy, Contractor shall re-test the system to ensure the correction of each discrepancy did not interfere with or alter the functionality of the system. The Contractor shall maintain a systematic approach to ensure a successful GAT for the SPEARPOINTS prototype system.

4 Testing and Training Support

The Contractor shall provide the testing and training support efforts necessary to ensure that the training and system refinement requirements of this contract are accomplished.

4.1 Testing and Training Support (TTS)

The Contractor shall provide training instructors who will conduct performance-oriented training using the approved curriculum and in compliance with the Task Order-defined instructor-to-student ratios. The full spectrum of training may include classroom, hands-on, simulation/virtual, field environment and exercises, combat scenario-driven, and simulated fire in a realistic and safe environment. Conduct of instruction shall also be in support of specialized training requirements using approved scenarios. The Contractor shall also participate as a Subject Matter Expert (SME) in developing revisions of the curriculum, Lesson Plans and Training Support Packages (TSP) to remedy any deficiencies or shortcomings identified during the preparation for and conduct of instruction. Contractor shall perform the following:

1. Prepare classroom or training areas and pick-up and return training devices as needed.
2. Perform operator maintenance on training aids and/or equipment.
3. Conduct classroom, laboratory, seminar, conference, discussion, lecture, demonstration, practical exercises, per class training schedule. Contractor shall develop and capture common training standards from a range of disciplines that are used across the military and civilian sectors, which provide structural and technological concepts to enhance and ensure that specific and relevant training is conducted in accordance with the PWS.
4. Maintain the curriculum and lesson plans by incorporating lessons learned from specific/relevant training; AARs; doctrine; and current and evolving Tactics, Techniques, and Procedures (TTP).
5. Assist in conducting and assessing student critiques to identify strengths, weaknesses, and actions to improve performance.
6. Schedule and conduct remedial training and student re-tests.
7. Maintain and update documentation or systems reflecting the number of students in training and class progression.
8. Review and summarize student course critique, scheduling remedial training as needed.
9. Provide academic counseling.
10. Assist in grading written tests.
11. Assist in grading results performance tests.
12. Assist in the execution of simulated-fire exercises and course field-training exercises.
13. Review a student's record for progression.
14. Complete Training Quality Reports and reports on Students identified for additional training.
15. Prepare, process, and forward required training records and/or any additional documentation.

4.1.1 System Test and Evaluation

The Contractor shall follow the established Contractor's Test and Evaluation (T&E) processes. The Contractor shall provide T&E planning support, including the development of test plans and procedures, preparation of Test & Evaluation Master Plans (TEMPs), and other T&E segments of documentation. The Contractor shall develop step-by-step testing operations to be performed on items undergoing testing. The Contractor shall identify items to be tested, the test equipment and support required, the test conditions to be imposed, the parameters to be measured, and the pass and fail criteria against which the test results will be measured. The Contractor shall conduct the execution of Software Test Descriptions, Test Procedures, performance analyses, and evaluation of measures of effectiveness. The Contractor shall provide the evaluation of test

plans, collection and analysis of test data during developmental and operational testing, drafting of test and evaluation reports. The Contractor shall provide support activities to include maintenance of test facility site designs and coordination of supporting activities and equipment to support joint interoperability and other testing, etc.

Deliverable	Due Date / Frequency
Test Procedure (DI-NDTI-80603A)	Initial: 30 days prior to start of Government Acceptance Subsequent: 30 days prior to testing
Test / Inspection Report (DI-NDTI-80809B)	Initial: 15 days after completion of testing Subsequent: 30 days after completion of testing

4.1.2 New Equipment Training

After the prototype has been delivered and accepted by the Government, the Contractor shall conduct one New Equipment Training (NET) to the 5th Special Forces Group for up to 10 individuals for a maximum of 16 hours. This training shall be a self-contained course and shall provide all the requisite operational and maintenance knowledge of the product to enable autonomous operation and maintenance by the Government.

4.2 Instructor / Operator (I/O) Support

The Contractor shall plan, conduct, and document the completion of the initial instructor and operator course for the initial cadre instructors. The course shall provide comprehensive training for instructors in the concepts, skills, and aptitude to efficiently operate the system. The course shall provide familiarization with simulator operating techniques and shall emphasize the utilization of the instructor facility, its functions, and controls. The course shall address the physical and functional descriptions and operation of the equipment, including features, advantages, and configurations. Once trained, Instructors/Operators are responsible for completing all tasks and subtasks described in **Section 4.1** above.

4.3 Maintenance Training

The Contractor shall plan, update, conduct, and document the completion of maintainer course for the initial cadre of maintenance personnel. The course shall provide comprehensive training for maintainers in the concepts, skills, and aptitude to efficiently operate the system. This course shall consist of instruction in troubleshooting and maintenance, diagnostics to fault isolation, calibration, adjustments, remove and replace procedures, use of the built-in test, and repair that is beyond operator-level maintenance. After completion of the course, all personnel shall be capable of operating, maintaining, and troubleshooting the prototype system to the board, field-replaceable unit, and consumable replacement level.

4.4 Site Support

Systems Engineering provides on-site personnel with the required skillsets for a period of 12-months following prototype installation to support the collective SPEARPOINT training tasks. If needed, the off-site Contractor team supports the on-site Contractor team remotely via phone and email. Support activities are recorded in the Jira tool, and details of problems encountered and working solutions are recorded in the Confluence tool, enabling the identification of problem trends and known resolutions. Jira is a software development tool that is utilized to plan and track engineering efforts through its internal customizable workflows. The Confluence tool is a wiki used as the main collaborative information sharing for the project. Recording common issues and working resolutions to these issues helps guide future support for potential production

SPEARPOINTS sites and helps identify and fully describe any defects which need to be addressed. If defects are noted, they are added to Jira and worked via the standard defect resolution process.

Support includes Non-Instructor services that enable the execution of POI and training. Normal training support functions include coordination and operations management; supply and property management and operations; training exercise and event planning; mission and training analysis; SMEs in military logistics operations; training assessment and evaluation; range operations and safety; training site maintenance, operations and management; training equipment maintenance and support; transport and management; training role players and Opposing Forces (OPFOR); radio repair and support; motor vehicle and equipment operations; automation system and network administration; audio-visual support; database analysis, development and management; organization administrative support; academic records management; program analysis and management; and TADSS management, operations, and support.

5 Personnel Requirements

The Contractor shall ensure that the personnel requirements of this contract are accomplished.

5.1 Instructor/Operator Qualification Requirements

Instructor/Operators shall have the required minimum of 5 years of experience serving in a medical capacity in a U.S. Special Operations Command (USSOCOM) unit with no more than 10 years since leaving that position at the time of application while remaining an active Prolonged Field Care trainer since their departure from USSOCOM. Instructor/Operators shall have the required minimum of either graduated from the SOCMSSC course with current or previous USSOCOM Special Operations Advanced Tactical Paramedic (SO-ATP), ACLS, PEPP, and Basic Life Support (BLS) or are NRP certified.

The Contractor Instructor/Operators shall attend the Special Operations Combat Medic Skills Sustainment course (SOCMSSC), Special Forces Medical Sergeant Skills Sustainment Course (SFMSSC), and SOCMSSC. This allows the Contractors to remain current on SOF medics' best practices, required skills and equipment, techniques, tactics, and procedures. Both courses are conducted at the Joint Special Operations Medical Training Center at Ft. Bragg, NC. The Government will fund and coordinate attendance with SOCOM; however, associated travel expenses will be incurred under the travel CLIN.

5.2 Anti-Terrorism (AT) Level 1 Training/ Operations Security (OPSEC)

All Contractor employees, including subcontractor employees, requiring access to Army installations, facilities, and controlled access areas shall complete AT Level I awareness training within 60 calendar days after contract start date or the effective date of incorporation of this requirement into the contract, whichever is applicable. The Contractor shall submit certificates of completion for each affected Contractor employee and subcontractor employee, to the Contracting Officer Representative (COR) or the contracting officer, if a COR is not assigned, within 60 calendar days after completion of training by all employees and subcontractor personnel. AT Level I awareness training is available at the following website:
<https://atlevel1.dtic.mil/at>.

All contractor employees working Information Assurance/ Information Technology (IA/IT) functions must comply with Department of Defense (DoD) and Army training requirements in

DoDD 8570.01, DoD 8570.01-M and AR 25-2 within six months of appointment to IA/IT functions.

5.2.1 Access to Government Information Systems

All contractor employees with access to a Government information system shall be registered in the Army Training Certification Tracking System (ATCTS) at commencement of services, and must successfully complete the DoD IA Awareness training prior to access to the Information System and then annually thereafter.

5.3 Access and General Protection Policy and Procedures

All Contractor employees and all associated sub-Contractor employees shall comply with applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by Government representative). The Contractor shall also provide all information required for background checks to meet installation access requirements to be accomplished by the installation Provost Marshal Office, Director of Emergency Services or Security Office. The Contractor's workforce shall comply with all personal identity verification requirements as directed by DoD, HQDA, and/or local policy. Contractor and all associated sub-Contractors employees shall comply with adjudication standards and procedures using the National Crime Information Center Interstate Identification Index (NCIC-III) and Terrorist Screening Database (TSDB) (Army Directive 2014-05/AR 190-13), applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by Government representative), or, at OCONUS locations, in accordance with the status of forces agreements and other theater regulations. For Contractors requiring a Common Access Card (CAC), the Contractor employee shall require, at a minimum, a favorably adjudicated National Agency Check with Inquiries (NACI) or an equivalent or higher investigation in accordance with Army Directive 2014-05.

5.4 iWATCH

The Contractor, to include all associated sub-Contractors, shall brief all employees performing under this contract on the iWATCH program. This training shall be completed within 60 calendar days of contract award.

6 Deliverables (CDRL)

All deliverables shall be provided to the Government in accordance with their corresponding schedule as detailed in the table below.

Deliverable	Due Date / Frequency
Contractor's Progress and Management Report (DI-MGMT-80227)	Initial: 30 days after award Subsequent: Monthly (by 10 th working day after month's end)
Integrated Master Schedule (DI-MGMT-81650)	Initial: 30 days after award Subsequent: As required throughout PoP
Risk Management Plan	Initial version delivered with Integrated Master Schedule Updated monthly when changes are made
Scientific and Technical Reports – Cybersecurity Artifacts (DI-MISC-80711A)	Initial: 30 days prior to the ATO Test Event Subsequent: As required throughout PoP
Scientific and Technical Reports – Cybersecurity Recurring Reports (DI-MISC-80711A)	Draft: 30 days prior to the ATO Test Event Subsequent: As required throughout PoP
Software Product Specification (SPS)	Initial: 30 days after delivery acceptance

Deliverable	Due Date / Frequency
(DI-IPSC-81441A)	Subsequent: 15 days after any change to product baseline
Technical Data Package Index (DI-EGDS-80918)	Initial: 30 days after delivery acceptance Subsequent: 45 days prior to PoP end date
Logistics Product Data (DI-SESS-81758)	Initial: 15 days after completion of testing Subsequent: 30 days after completion of testing, final 30 days prior to PoP end date
Proposed Spare Parts List (DI-ILSS-80134A)	Initial: 30 Days after Delivery Acceptance Subsequent: 30 days after completion of testing
Unique Identification (IUID) Marking and Verification Report (DI-MGMT-81858)	Initial: 30 Days prior to completion of testing Subsequent: 30 days after completion of testing, with final submission 30 days prior to PoP end date
Page-Based Technical Manuals (MIL-STD-40051-2B)	Initial: 30 days after delivery acceptance Subsequent: 30 days after completion of testing
Production Drawings and Associated Lists (DI-SESS-81000E)	Initial: 30 Days after delivery acceptance Subsequent: 30 days after any change to product baseline
Commercial Drawings and Associated Lists (DI-TMSS-80527C)	Initial: 30 Days after delivery acceptance Subsequent: 30 days after completion of testing
Training Materials (DI-ILSS-80872)	Initial: 30 days prior to first fielding acceptance Subsequent: upon request, and final 30 days prior to end of PoP
Test Procedure (DI-NDTI-80603A)	Initial: 30 days prior to start of Government Acceptance Subsequent: 30 days prior to testing
Test / Inspection Report (DI-NDTI-80809B)	Initial: 15 days after completion of testing Subsequent: 30 days after completion of testing